

IN THE CLAIMS

The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

1. (Currently Amended) A method of conducting, in relation to a print job, a printing process between an originating device and a printer, said method comprising the steps of:
 - ~~connecting a physical security key to the originating device;~~
 - ~~initiating, in association with the physical security key connected to the originating device,~~ the printing process at the originating device for outputting the print job from the printer;
 - encrypting, at the originating device, the print job with a public key corresponding to a private key;
 - suspending the printing process prior to outputting the print job from the printer;
 - connecting ~~the~~ a physical security key, which embodies the private key corresponding to the public key, to the printer; ~~and~~
 - decrypting, at the printer, the print job with the private key embodied by the physical security key connected to the printer; and
 - enabling, ~~in association with the physical security key connected to the printer,~~ after decrypting the print job with the private key, the suspended printing process to output the print job from the printer.

2. (Previously Presented) A method according to claim 1, wherein the physical security key is connected to originating device or the printer by being inserted into the originating device or the printer.

3. (Previously Presented) A method according to claim 1, wherein a private key corresponding to a public key is embodied physically as the physical security key.

4. (Currently Amended) A system for conducting a ~~secure~~ printing process, in relation to a print job, between an originating device and a printer, wherein the originating device and the printer communicate over a network, said system comprising:

~~a security key interface at the originating device, adapted to connect a physical security key to the originating device;~~

~~a user interface, adapted to initiate, in association with the physical security key connected to the originating device,~~ the printing process at the originating device for outputting the print job from the printer;

an encryption module adapted to encrypt the print job with a public key corresponding to a private key;

at least one processor module, adapted to suspend the printing process prior to outputting the print job from the printer; ~~and~~

~~a local user security key interface at the printer, adapted to connect the a physical security key, which embodies the private key corresponding to the public key to the printer; and~~

a decryption module adapted to decrypt, in association with the physical security key

connected to the printer, the print job with the private key,

wherein said at least one processor module is adapted to enable, ~~in association with the physical security key connected to the printer,~~ after decrypting the print job with the private key, the suspended printing process to output the print job from the printer.

5. (Canceled)

6. (Currently Amended) A system according to claim 4, wherein ~~[[a]]~~ the private key corresponding to ~~[[a]]~~ the public key is embodied physically as the physical security key.

7. (Previously Presented) A computer program recorded on a computer-readable medium, the program comprising software code portions for performing the steps of claim 1.

8. (Previously Presented) A computer readable medium storing a computer program, wherein said computer program comprises software code portions for performing the steps of claim 1.

9. (Previously Presented) A printing method comprising the steps of:
encrypting image data at an originating device to initiate a printing process for printing the image data on a printer, by using public key information that corresponds to private

key information;

suspending the printing process prior to printing the image data on the printer;

connecting a physical security key embodying the private key information to the printer; and

decrypting the encrypted image data to enable the suspended printing process to print the image data on the printer, by using the private key information embodied by the physical security key connected to the printer.

10. (Previously Presented) A method according to claim 9, further comprising the step of:

selecting, at a computer communicating with the originating device over a network, the image data to be printed, wherein the image data is stored at the originating device.

11. (Canceled).

12. (Currently Amended) A system comprising

an encryption processor, at an originating device, adapted to encrypt image data to initiate a printing process for printing the image data on a printer, by using public key information that corresponds to private key information;

at least one processor module, adapted to suspend the printing process prior to printing the image data on the printer;

~~local user~~ a security key interface at the printer, adapted to connect a physical security

key, embodying the private key information to the printer; and

[[an]] a decryption processor, at the printer, adapted to decrypt the encrypted image data to enable the suspended printing process to print the image data on the printer, by using the private key information embodied by the physical security key connected to the printer.

13. (Previously Presented) A system according to claim 12, further comprising:

a computer for communicating with the originating device over a network, and for selecting the image data to be printed, wherein the image data is stored at the originating device.

14. (Canceled).

15. (Previously Presented) A method according to claim 1, wherein the physical security key is specific to the print job.

16. (Previously Presented) A system according to claim 4, wherein the physical security key is specific to the print job.

17. (New) A method of conducting, in relation to a print job, a printing process between an originating device and a printer, said method comprising the steps of:

automatically establishing communication via a network between the originating device and the printer, said originating device and said printer being designated as a first device

and a second device respectively, said first device and said second device forming a current chain of devices each having an associated profile; said automatically establishing step comprising:

(i) a determining step of determining a profile match between all successive pairs of devices in the current chain of devices;

wherein said method comprises:

(a) a first establishing step of establishing, if the profile match between all the successive pairs of devices in the current chain of devices is not found, the communication between said first device and said second device by interposing at least one additional device, said interposing forming a second chain of devices including the devices in the current chain of devices and said at least one additional device, wherein

the first establishing step is performed by at least one of the devices in the current chain of devices;

if a profile match is not found between all the successive pairs of devices in the second chain of devices which comprises the devices in the current chain of devices and said at least one additional device, then the method comprises the steps of (A) designating the second chain of devices which comprises the devices in the current chain of devices and said at least one additional device as the current chain of devices, and (B) repeating the first establishing step; and

(b) a second establishing step of establishing, if the profile match between all the successive pairs of devices in the current chain of devices is found, the communication between said first device and said second device without interposing said at least one additional device, wherein the second establishing step is performed by at least one of the

devices in the current chain of devices, wherein said method of conducting, in relation to the print job, the printing process, further comprises:

initiating the printing process at the originating device for outputting the print job from the printer;

encrypting, at the originating device, the print job with a public key corresponding to a private key;

suspending the printing process prior to outputting the print job from the printer;

connecting a physical security key, which embodies the private key corresponding to the public key, to the printer;

decrypting, at the printer, the print job with the private key embodied by the physical security key connected to the printer; and

enabling, after decrypting the print job with the private key, the suspended printing process to output the print job from the printer.

18. (New) A system for conducting a printing process, in relation to a print job, between an originating device and a printer, wherein the originating device and the printer communicate over a network, said originating device and the printer being designated as a first device and a second device, said system comprising:

an apparatus for automatically establishing communication via the network between the first device and the second device, said first device and said second device forming, when communicating, a current chain of devices each having an associated profile, said apparatus constituting one of said first device and said second device and comprising:

(i) determining means for determining a profile match between all successive pairs of devices in a chain of devices;

wherein said apparatus comprises:

(a) first establishing means for establishing, if the profile match between all the successive pairs of devices in the current chain of devices is not found, the communication between said first device and said second device by interposing at least one additional device, said interposing forming a second chain of devices including the devices in the current chain of devices and said at least one additional device;

(b) repeating means which, if a profile match is not found between all the successive pairs of devices in the second chain of devices which comprises the devices in the current chain of devices and said at least one additional device, (i) designates the second chain of devices which comprises the devices in the current chain of devices and said at least one additional device as the current chain of devices, and (ii) repeats the first establishing means; and

(c) second establishing means for establishing, if the profile match between all the successive pairs of devices in the current chain of devices is found, the communication between said first device and said second device without interposing said at least one additional device, said system further comprising:

a user interface, adapted to initiate the printing process at the originating device for outputting the print job from the printer;

an encryption module adapted to encrypt the print job with a public key corresponding to a private key;

at least one processor module, adapted to suspend the printing process prior to

outputting the print job from the printer;

a security key interface at the printer, adapted to connect a physical security key, which embodies the private key corresponding to the public key to the printer; and

a decryption module adapted to decrypt, in association with the physical security key connected to the printer, the print job with the private key,

wherein said at least one processor module is adapted to enable, after decrypting the print job with the private key, the suspended printing process to output the print job from the printer.